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QUEEN ELEANOR'S CROSSES.

QUEEN'S CROSS, NORTHAMPTON.

II.

We left our account of Edward I. and Queen Eleanora at the period of their progress through their French dominions on their way to assume the English crown. They landed at Dover, August 2, 1273, and were received with every demonstration of joy. In London the rich merchants showered gold and silver on the royal retinue as they passed under the windows of "the Chepe;" while both houses of parliament assembled to do honour to their king and his admired consort. The coronation took place on the 19th of the same month, when the most lavish hospitality was exercised. Successions of banquets were prepared in the Old and New Palace yards for the entertainment of all who chose to partake of them; and one feature of the coronation, as recorded in a MS. preserved by Sir Robert Cotton, is too remarkable to be omitted. At the royal feast which succeeded the coronation of Edward and his queen, King Alexander of Scotland came to do the king service, and with him came a band of a hundred knights, horsed and arrayed. "And when they were light off their horses, they let their horses go whither they would, and they that could take them had them for their own behoof." In like manner also it is said that the Earl of Pembroke and the Earl of Warren came each of them leading a horse by their hand, and a hundred of their knights did the same. "And when they were alight off their horses they let them go wherever they would, and they that could take them had them still at their liking."

The king of Scotland and the duke of Bretagne were present at the coronation of Edward and Eleanora; but Llewellyn, prince of Wales, absented himself, refusing to do homage to the English king. Five years of warfare followed this slight to the authority of Edward; and the contest was still farther embittered by the capture of the bride of Llewellyn. The vessel which was conveying this youthful lady from France, was seized by some Bristol merchantmen; but though she was the daughter of Simon de Montfort, Edward's mortal foe, whom he had slain in battle, he received her with kindness and courtesy, and consigned her to the care of his queen, with whom she resided at Windsor Castle. On her account Llewellyn at last submitted to the required homage, and his marriage with the lady Elinor Montfort took place at Worcester cathedral, where Edward gave away the bride, and the queen supported her at the altar.

The peace with Wales was, however, of short continuance. A prophecy of Merlin asserted that a prince born in Wales should be acknowledged king of the whole British island, and the bards of that land were constantly urging on Llewellyn the ignominy attending his homage paid to Edward for that which was his lawful right, and inciting him to endeavour, in his own person, to accomplish the prophecy. Taking advantage of the absence of Edward and Eleanora, who went to take possession of the provinces devolving on the latter by the death of the queen of Castile, Llewellyn suddenly invaded England, and won two or three brilliant victories at the first onset; but the return of Edward, and the fatal result of the skirmish in which the brave Llewellyn met his death, soon altered the state of things. Edward remained among the Welsh, to keep down the spirit of the people; and Eleanora, as usual, followed him in all his campaigns. In the spring of 1284, Edward took his queen to the strong fortress of Caernarvon, which he had just completed. Edward exhibited his skill and judgment in profiting by the natural advantages of this spot, which was an admirable situation for a curb on the newly conquered country. The castle and fortifications were built within the space of one year by the labour of the peasants, and at the cost of the chieftains of the country, on whom the hateful task was imposed by the conqueror. Pennant, writing in 1781, speaks of the external state of the walls and castle, as being exactly what they were in the time of Edward I. The walls are defended by a number of round towers, and have two principal gates; the east, facing the mountains: the west upon the Menai. The entrance into the castle is very august, beneath a great tower, on the front of which appears the statue of the founder, with a dagger in his hand, as if menacing his newly-acquired and unwilling subjects. The gate has four portcullises and every requisite of strength. The court is oblong. The towers are very beautiful; none of them round, but pentagonal, hexagonal, and octagonal. The Eagle tower is remarkably fine, and has the addition of three slender angular turrets, issuing from the top. To this celebrated castle did Edward bring his Eleanora; and there, in a little dark room of the Eagle tower, measuring not quite twelve feet long, by eight broad, was born Edward of Caernarvon, prince of Wales. The gate by which Queen Eleanora entered is at a vast height from the ground, and could only be approached by a drawbridge supported on masses of rock. The accommodations of the castle were probably but little suited for the entertainment of such a guest; but Eleanora could lay aside the splendid accompaniments of her royal dignity when her husband's interests demanded the sacrifice: she had already become inured to privations during her expedition to the Holy Land, and she was therefore the better fitted for her sojourn in the Eagle tower. No doubt she put in use her newly-introduced custom of hanging the walls with tapestry, indeed it is said that some marks of tenters still appear on the walls of her dreary apartment. This was the more necessary in this instance, for the chamber has no fireplace, and notwithstanding the smallness of the apartment, we may conclude that it was a chilling abode in the month of April when the young prince was born. At the time when Grose wrote his *Antiquities of England and Wales*, the cradle of the unfortunate prince was in the possession of the Rev. Mr. Ball, of Newland in Gloucestershire; to whom it descended from one of his ancestors, who attended that prince in his infancy, and to whom it became an honorary perquisite. A drawing of the cradle was made for the *London Magazine* in 1773, which appeared in the following year, together with this description.

This singular piece is made of heart of oak, whose simplicity of construction and rudeness of workmanship are visible demonstrations of the small progress that elegancy had made in ornamental decorations. On the top of the uprights are two doves; the cradle itself is pendent on two staples driven into the uprights, linked by two rings to two staples fastened to the cradle; and by them it swings. The sides and ends of the cradle are ornamented with a great variety of mouldings, whose junctions at the corners are not mitred, but cut off square without any degree of neatness, and the sides and ends fastened together by rough nails. On each side are three holes for the rockers to secure the uprights from falling; and the whole is rendered steady by cross-pieces for feet, on which it stands. Its dimensions are three feet two inches long, one foot eight inches wide at the head, and one foot five inches wide at the foot; one foot five inches deep; and from the bottom of the pillar to the top of the birds, is two feet ten inches.

The unsettled state of Wales at this period points to the reason why Eleanora was thus immured. The walls of Caernarvon Castle are about seven feet nine inches thick, and have within their thickness a convenient gallery with narrow openings for the discharge of arrows. The walls of the Eagle Tower are near two feet thicker. From its summit is a noble view of the Menai, Anglesey, and the nearer parts of the British Alps.

Edward I. was at Rhuddlan Castle when the much-desired prince was born, a native of Wales, and as it was hoped, the future recognised heir of that land. The joy with which he received the tidings, was shown by his munificent treatment of the bearer of them, Griffith Lloyd, a Welsh gentleman, whom he knighted on the spot, and presented with a most liberal donation of lands. The king immediately hastened to Caernarvon, and three days afterwards he assembled thither all the chiefs of North Wales, who came to make their final submission, and to intreat that the king would appoint them a prince who was a native of their own country, and whose native tongue was neither French nor Saxon, which they said they could not understand. Edward told them that he would immediately appoint them a prince who could neither speak French nor Saxon. This gave great satisfaction to the assembled chiefs, and they declared they would instantly accept him, provided that his character was free from reproach. Edward then presented to them his infant son, assuring them that he was just born a native of their country, that he could not speak a word of English or French, and if they pleased, the first words he uttered should be Welsh. It was with an ill grace, no doubt, and with a disappointed air that the mountain chiefs of Wales vowed fealty to this babe, instead of to a descendant of their own royal line, whom Edward's ambiguous words had led them to expect as their future ruler. Nevertheless they submitted to the appointment as best they could, and kissed the tiny hand which was to sway their sceptre. At this important era in the life of Edward and Eleanora, when by a concurrence of events, together with a bold political manœuvre on the part of Edward, the unqualified submission of the Welsh nation had been obtained, we now pause in their history to notice the illustration of the present article.

The Cross at Northampton

It would be inappropriate here to enter on the details connected with the erection of this cross. These will have their place in the narrative above entered on; but we may remark concerning its situation that it stands at the meeting of four roads, on a rising ground, at about half a mile from the town of Northampton, in the parish of Hardingston. The Society of Antiquaries give the following description of this monument:—

It is divided into three stories; the first octagonal, fourteen feet high. The sides divided by purfled finials are charged with arches of two compartments under a pointed purfled pediment. Under the arches of the compartments are hung, on foliage of different patterns, shields of arms. On the south and east sides, those of Castile and Leon, quarterly, and of Ponthieu in Picardy, single. On the north Castile and Leon, quarterly, the arms of her father, and England, single. On the north-east side, England and Ponthieu, the arms of her mother, each single. The arms on the west, south-west, south-east, and north-west sides, are entirely obliterated. From the centre mullion of each of these compartments projects in high relief an open book lying on a desk. The second story, shaped like the former, is but twelve feet high. In every other face, within a niche, under a projecting and insulated canopy with a purfled pediment terminating in a bouquet, stands a figure of the queen, about six feet high, crowned and royally habited. There remain traces of a sceptre in her right hand, while the left, perhaps, held a globe or lay on her breast, as on her monument. The habits of each figure differ from the other. The figures and ornaments are in good repair. The upper story is square, eight feet high, the sides adorned with arches, with quarterfoils in their points in relief, and under them a sun-dial, put up in 1713.

It appears that the cross, six feet in height, which crowns the monument, was added by order of the bench of justices, when the whole was under repair in 1713. The base of this beautiful structure is formed of an ascent of eight steps, each about a foot broad, and nine inches high. In the execution of this cross, the architect and the sculptor are almost equally concerned, and it has been supposed that at the time of its erection both professions were combined in the same individual. The design and execution have been ascribed by Vertue and Walpole to Peter Cavallini, a Roman sculptor, to whom they likewise give the merit of the crosses at Geddington, Waltham, &c.; but this opinion is disputed by other writers. While it must remain a matter of conjecture, who was the architect of these truly interesting structures; the peculiar styles of sculpture and architecture displayed in them are universally admitted to be admirable in their respective classes. The cross at Northampton, when perfect, must have been a beautiful and picturesque object, as it still remains to a high degree in the present day. Unfortunately it has been much disfigured by the repairs executed by officious and ignorant individuals. A large white marble tablet has been affixed to it with a long Latin inscription to commemorate a restoration of the cross, carried on by the magistracy of Northampton in 1713. They have thus injured the design and masonry of the building they professed to restore, and have spoiled the effect of the whole structure, by giving undue prominence to the account of their own performances.

Early Gray Hairs.

O'er my head, e'en yet a boy,
Care has thrown an early snow:
Care, begone! a steady joy
Soothes the heart that beats below.

Thus, though Alpine tops retain
Endless winter's hoary wreath;
Vines, and fields of golden grain,
Cheer the happy sons beneath.—Penrose.

LESSONS FROM NATURE.

On entering a gallery of original paintings, figures of wonderful excellence strike us with powerful attraction. Every person of taste and sensibility perceives instantaneously their paramount distinction; and the first emotion produced thereby in well-informed minds, is some degree of solicitude about the author; for nothing has so direct a reference to its cause, as merit of execution. Much laudable ingenuity is displayed in discriminating the different masters, ascertaining their respective eminence, pointing out the peculiar beauties of the several schools to which they belonged, the amateurs under whose auspices they studied, the correctness of their designs, their colouring and their costume. In all this minute investigation, what should we think of the critic or connoisseur who could gravely allege that all the diversified apparatus around us originates in no cause, that not one of those masterly pictures is the work of any artist whatever, and that the whole resulted, not from intelligence or design, but from blind impulse or lawless chance? So, they who survey the magnificent machinery of Nature, and more especially the wonderful phenomena of the skies, and yet can harbour a doubt of the invisible Creator, or indeed are not impressed, wherever their eyes wander or their meditations rest, with a deep sense of the ever present God, either have not the faculty of reason, or pervert it to gratify their passions, or to strengthen their impiety.

The hopes and fears which alternately expand and depress the human heart, evince our connexion with another state of being, and that our destiny is not confined to the narrow precincts of mortality. Our present condition is not stationary or in a circle, but is obviously progressive; it begins, indeed, amidst the manifold frailties of flesh and blood, but terminates in the consummations of a world to come.

The most untutored of the species is more or less conscious of a principle, an impulse or power within him, which occasionally lifts him above the sphere of his senses, and by which he endeavours to solve the phenomena, both above and about him, in a way the most obvious to his understanding. The pageantry of the Indian's idolatry, gross and sordid as it may appear to more enlightened minds, is as much an object of reverence to him, as our religious institutions are to us. The piety of Nature's uninstructed child, indeed, has this in its favour, that he adores the effect, only by a mistaken substitution of it for the cause. But our habitual inattention to the one indicates a criminal indifference to the other. He would do his duty, but he is ignorant of its nature; we know ours, but leave it undone.

It is a maxim, founded on experience and the history of the species, that in no state of the human intellect, improved or unimproved, is it ever maturely disposed, ultimately at least, to rest in present appearances. From the highest eminence of science that man ascends, another, still higher, catches the eye, and tempts his pursuit.

> Hope springs eternal in the human breast,
> Man never is but always to be blest.

There is a propensity in all our motions and exertions which bears an affinity to a higher system, which is not in unison with any known properties of matter, and which, abstracting our affections from things evanescent and momentary, is continually propelling them to such as are superior and invisible.

By man's natural turn for investigation, any object that excites his attention or stimulates inquiry is the means of improving our knowledge of the Deity. He is known by his works as certainly as any human artist can be by his. These are uniformly expressive of most important information concerning Him. From them we know much of his character, and many of his perfections. They are universal, intelligible, and unequivocal documents of who he is, what he can do, and

the relation in which he stands, as well to us as to them. And here his attributes, his intentions, his energies, and the whole character of his Divine government, are everywhere so legible, that he who runs may read his power, wisdom, and goodness.

It has, indeed, been much, and plausibly, questioned whether the discovery of one supreme intelligent Cause of all things, be the induction of reason or the result of instruction. The chief considerations on which the solution turns, are now so completely involved, and run into each so intimately, that it may not perhaps be easy to say on which side the truth lies. But the Christian dispensation has put us in possession of a clue which happily frees our minds from all the difficulties and embarrassments into which ignorance and temerity had plunged them; which has led us to the fountain-head of all true knowledge, by the guidance of which we can be no longer at any loss to account for phenomena otherwise inexplicable.

The material world has in consequence emerged from the palpable darkness in which superstition had involved it, and presents us with a striking image of its Maker, by the light reflected from that which is invisible. We henceforth regard it as a theatre on which the agency and attributes of the Almighty are conspicuously displayed, and by the simple means of which, he holds uninterrupted correspondence with the whole of his family, in all the various ways of which they are capable. Nature thus interpreted, is susceptible but of one construction. Her language, always simple and direct, is everywhere the same; and there is no nation or country on earth unfurnished with those means, by which it may be equally and clearly understood.

This we call the Theology of Nature, as the elements of it, at least, are perspicuously detailed in her works. Whatever we know of the Divinity, apart from the positive instructions he vouchsafes, is from the contrivance and design manifested in systems with which we are acquainted, the disposition and motions of the heavenly bodies, the nature of the planet we inhabit, the processes of the vegetable world, and the animal organization or mechanism.

What are these, separate or combined, but an expressive picture of their Author? and the more they are considered and comprehended, his power, wisdom, and benignity will be better understood, and will become more illustrious and impressive. It is the steady and solid conviction that he is, and that his attention to the greatest and best of his creatures is unmerited, which constitutes the basis of our hopes, and gives beauty, harmony, and interest, to the universe. Take Him out of it, and chaos comes again; but replace Him at its head, where from everlasting to everlasting He is God, then nature resumes her sweetness, and all creation smiles with joy.

Nothing but the Almighty's presence preserves all the parts of creation in unison, and gives energy and effect to that mysterious agency which connects, consolidates, and binds them into one vast comprehensive whole. It is the strength of his unseen arm which hangs them upon nothing, and by which they perpetually circulate as on invisible springs. His power protects and upholds them in their respective situations, and enables them to sustain their relations with propriety. It is by the breath of his mouth that the whole beautiful assemblage of shining worlds exists, and when he withdraws it, they are extinct. What, then, is the spacious and magnificent creation, but an expressive and majestic representation of his infinite power and exuberant love, who surveyed everything that he had made with complacency, and, behold, it was very good?

Is not immeasurable space crowded with columns to the honour of the Divine Artist? These are one and all inscribed to his name, illustrate the excellence of his perfection, and perpetuate his praise. The vast canopy of heaven may be considered more particularly as an immense area where the matchless wonders of his skill and contrivance mark an eternal exhibition, through all their spheres and evolutions, before an intelligent and astonished universe. A variety of worlds, exceeding all comprehension in number and magnitude, in which our terrestrial globe is but an atom, are stationary in their order, destiny and rotation. When, therefore, we seriously reflect how the Creator of all these things hath placed and balanced our earth in the midst of the air, and the universe as it were in the midst of nothing; how he hath hung for so many important uses those glorious lights of heaven, the sun, the moon, and the stars, and made paths in the sky for their courses;—instituted the regular circle of the seasons, summer and winter, seed-time and harvest;—how he hath stocked our earth with inhabitants, and rendered it fertile for their sustenance and accommodation; and laid the sea in heaps, that though it may overlook, yet cannot overflow the land;—who can possibly doubt the exceeding greatness of his power, the infinite resources of his wisdom, the plenitude of his goodness, and the bounty of his providence?

[Abridged from BASELEY'S *Glory of the Heavens.*]

THE art of governing the passions is more useful, and more important, than many things, in the search and pursuit of which we spend our days. Without this art, riches and health, and skill, and knowledge will give us little satisfaction; and whatsoever else we be, we can be neither happy, nor wise, nor good.—JORTIN.

TO A SNAIL.

WHERE art thou roaming to, wonderful snail,
With thy beautiful house on thy back?
Leaving behind thee a silvery trail,
On the emerald hue of thy track.

Slow is thy march, for thou needest not wings
From thy journeyings homewards to fly;
A cosmopolite, roaming yet ever at home,
Like thy wild sons of waste Araby.

Lark, that in raptures soars singing at morn,
When fatigued returns home to his nest;
Rabbit, that wanders through clover or corn,
Seeks again for his burrow to rest.

Gipsy of nature! thou wanderest free,
Not a localized being art thou;
Pitching thy tent in the lane 'neath a tree,
On the moor or the lone mountain's brow.

I meet thee at morn in my favourite walk,
By the riv'let or rose-scented hedge;
Tasting in quiet each delicate stalk,
Or careering sublime on a sedge!

Rich is the hue of thy elegant home,
Purest amber and deep glossy brown:
Pearly and smooth as a fair maiden's comb,
Where thou glidest, or upwards or down.

Beetle with burnished mail, golden and green,
And the butterfly splendidly bright—
Feeding beside thee *all* rare things are seen,
And the glow-worm doth lend thee a light.

In days of my childhood I've gathered thy bields,
And watched thy slow patient motion;—
Much musing if thou wert a native of fields,
Or palmer, foot-sore, from far ocean.

Oft when the summer-blooms, beauteous, are gone,
Scared away by the bleak wintry weather—
'Mong the dry leaves I find ye, or by an old stone,
Like a hamlet cemented together*.

Man, of his knowledge and skill all too proud,
Deepest lessons might gather from thee;
Feelings of thankfulness, heart calmly bowed,
To our gracious Creator's decree:

Might learn to confide in that wisdom sublime,
That goodness unbounded and pure,
Which launched the vast orbs on the ocean of time,
Gave the Snail a retreat so secure.——J. W.

* This is true only of the larger species of shell snail; the smaller and more beautiful species pass the winter singly

EASY LESSONS IN CHESS.

XII.

In our ninth lesson, contained in the last volume of the *Saturday Magazine*, p. 200, we stated the solution to the four problems given in previous lessons. In each of these problems check-mate was effected in only two moves, and therefore required on the part of the young student no great exertion of skill for their solution. In the same lesson we introduced a problem, No. V., in which White moving first was required to check-mate his adversary on the third move. From the numerous letters containing the correct solution with which our young chess friends have favoured us, we have reason to expect that the problem was solved without much difficulty; but as it forms part of our plan to give from time to time the solutions to all the problems contained in these lessons, we devote the present lesson to such solutions, and to the statement of two more problems.

SOLUTION TO PROBLEM V.

WHITE.	BLACK.
1. Q. to K. R. seventh sq. checkg.	1. Kt. takes Q.
2. Kt. to K. Kt. sixth sq., checkg.	2. K. to K. Kt. square.
3. K. B. to Q. fifth square, check-mate.	

It need scarcely be observed, that at his first move Black was compelled to take the Q. with his Kt., and not with his K.; although by doing so his own piece facilitated the mate by blocking up the means of escape.

In our tenth lesson, contained in *Saturday Magazine*, Vol. XXI., p. 240, will be found Problem VI., in which White is to check-mate his adversary in three moves. On the subject of this problem a correspondent has sent us the following remarks:—

In this problem White gives check-mate in *two* instead of *three* moves as required; and it must be bad play to try to do that in *three* which can be accomplished in two moves: for example:—

1. White Q. to K. B. third square, checking. Black cannot move out of check, and can only cover by moving, 1. B. to K. Kt. fifth sq., whereupon the White Q. takes the B. and check-mates.

We have already cautioned our readers that if they fancy they see an error in the chess problems, or in the terms in which they are to be solved, to mistrust themselves rather than us. Our correspondent is perfectly right in the remark, that it is bad play to try to do that in three which can be done in two moves, but he has been a little hasty in applying this chess truth to the problem in question. If, as he proposes, the White Q. moves to K.B. third, checking, what becomes of the White Rook at K. Kt. sixth square? Black would assuredly capture it with his King, and not play so badly, as our correspondent supposes, as to interpose his B. and invite check-mate next move.

The correct solution is as follows:—

WHITE.	BLACK.
1. Q. to K. Kt. fourth sq., checking.	1. B. takes Q.
2. R. takes K. R. P., checking.	2. K. Kt. P. takes R.
3. K. B. to K. B. seventh square, check-mate.	

It will be noticed that in this problem it matters not which of the first two moves be played first.

PROBLEM VII., contained in the same lesson, is solved thus:—

1. R. to K. Kt. fifth square, checking.	1. K. takes R.
2. Kt. to K. B. seventh sq. checking.	2. K. to K. R. fourth square.
3. K. Kt. P. two squares, checking and check-mate.	

The moves of the White remaining the same. Black might have played thus:—

	1. K. to K. R. third square.
	2. K. takes R.

In our eleventh lesson, beginning at p. 7, of the present volume, will be found PROBLEM VIII. The solution is as follows:—

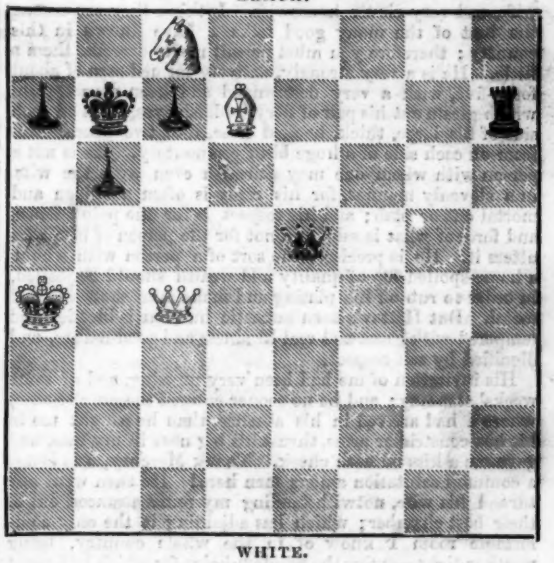
1. Kt. to K. second sq., checking by discovery.	1. K. to K. fifth square.
2. Q. to K. B. fourth square, checkg.	2. K. takes R.
3. Kt. to Q. B. square, checking and check-mate.	

SOLUTION TO PROBLEM IX.

1. Kt. to K. Kt. fifth square, checking.	1. R. takes Kt.
2. K. R. to K. B. sixth sq. checkg.	2. K. takes K. R.
3. Q. R. to Q. sixth square, giving check-mate.	

PROBLEM X. *White moving first is to give check-mate on the third move.*

BLACK.



WHITE.

PROBLEM XI. *White to move first, and to check-mate in three moves.*

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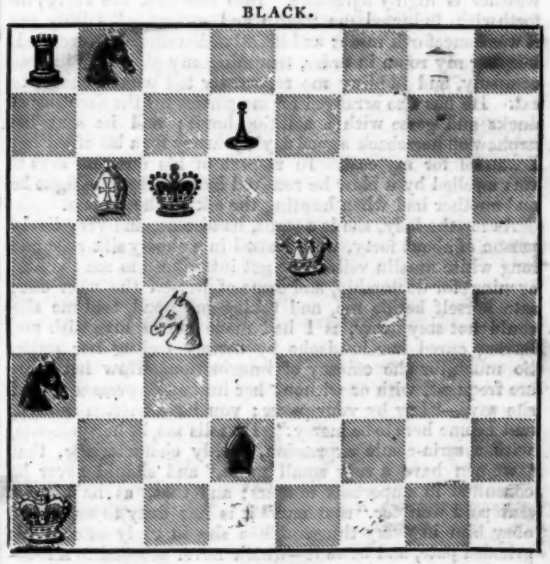


WHITE.

Ah! what avail the largest gifts of Heaven,
When drooping health and spirits go amiss?
How tasteless then whatever can be given?
Health is the vital principle of bliss,
And exercise of health. In proof of this,
Behold the wretch, who slugs his life away,
Soon swallow'd in disease's sad abyss;
While he whom toil has braced, or manly play,
Has light as air each limb, each thought as clear as day.

THOMSON.

A CIRCASSIAN PAIR.

I MUST give you a sketch of Mr. and Mrs. Hattav, my present host and hostess, who are a very estimable couple, and who afford the edifying spectacle of love and esteem having survived youth; the rareness of which occurs, as you may know, through people forgetting that effects spring from causes, and that if the latter be not sown the former cannot be reaped. In short, Mr. and Mrs. Hattav love and esteem each other, not only because they are man and wife, but because they each perform those things which produce love and esteem; he being a good Mussulman, a remarkably brave warrior, a kind husband, a most generous friend, a lively companion, and an active, industrious person, in both public and private affairs; and she a fond, dutiful, cheerful wife, and very clever housewife. I think they are among the best of the many good folks I have known in this country; therefore you must permit me to describe them a little. He is a very strongly, actively-formed man of about forty-five, with a very determined and keen aspect, from which gleam out his pair of fiery, reddish eyes, from on each side of his large, thick, hooked nose, like two beacon-fires from on each side of a huge bluff promontory. He is not a person with whom one may skirmish even with the wits, in a slovenly manner, for his reply is often a sudden and mortal cut or stab; and his respect is for the point, fence, and force of what is said, and not for the person of him who utters it. He is precisely the sort of a person with whom a home-spoiled fop of quality and wealth should be jostled, in order to rub off his plating and make him show his real metal. But Hattav's keen sarcastic humour is blended and tempered with great and real kindness and good-nature, and dignified by self-respect.

His invitation of me had been very pressing, and of some weeks' standing; and he no sooner entered the guest-house, where I had arrived in his absence, than he caught me in his boa-constrictor arms, thrust his big nose in my face, and gave me a kiss on each cheek. Thank Mercury, this is not a common salutation among men here! He then went and turned his wife, notwithstanding my remonstrances, out of their best chamber; which has adjoining it the only comfortable room I know of in the whole country, being weather-tight—saving the window-holes, for which he begged paper coverings—and heated by a large earthen stove to about summer temperature, which in the present bitter weather is highly agreeable. Into this (not the stove) he forthwith inducted me "scrip and scrippage," telling me it was henceforth mine; and his attention since is unwearied, keeping my room in order, trimming my pipe, keeping me company, and bidding me repeatedly tell what I choose to eat. He has also arranged for me parties for the shooting of ducks and geese with a stalking-horse; and he sent his nephew on horseback a good day's journey for a bit of leather I wanted for my coat. In respect of his nose, he says it was swelled by a blow he received in the desperate fight he and another had when hunting the elk on the Kúban.

As for the lady, she is a stout, handsome, and very lively person of about forty, well-dressed in a showy silk robe and long white muslin veil. She got introduced to me the first evening for doctorship, and came of herself the next one; sate herself beside me, and taking my hand, told me she could not stay away, as I had made her in love with me, having cured her headache by merely feeling her pulse. So much for the efficacy of imagination. Now her visits are frequent, with or without her husband's presence; and she says—"Lay by your paper; you have written enough, and I come here to be merry." He tells me, in her presence, with a serio-comic expression, highly characteristic, that "women have a very small mind," and should never be consulted in important matters; and that, as he bought and paid well for "that one," it is her duty to serve and obey him in every thing. Then she in reply catches his grizzled pate, and bows it—which never stooped to a foe—into her lap. A threat to buy a young wife is retaliated by him; which I repel by objections as to his personal beauty; and by so doing incur the common penalty of those who interfere in such skirmishes, in having both man and wife attack me as to the heretical notion that good looks should be at all deemed requisite on a man's part, provided he be brave. But his pride of her is shown by telling me that he leaves her at liberty at all times to kill a sheep or even an ox to regale visitors in his absence; to entertain them, otherwise, with the best of every thing; and to present any one with a bee-hive of honey, or what she thinks proper: and her pride of him, by her telling me that, when the great Russian force was here two years ago, instead of seeking safety as most of her female neighbours did, she went *in high spirits* to the brow of the neighbouring hill to see him fight in the valley below. They have no progeny; but the parental yearnings seem solaced by the nephews and nieces who swarm ever in this cheerful domicile. Their young Polish serf declares that he has refound in them a father and mother; evidence of which kindness I have seen; and that living could not be better, as he has with the rest meat, pastry, honey, &c. every day. Heaven grant them still a long lease of their plenty and content!—BELL'S *Residence in Circassia.*

IT is good for us to know ourselves; but the minds of other men are a sort of mirror, which reflects our own image; and you will always find that, as you know other men more, you will be the better acquainted with yourself.—HOGG.

QUARRIES OF ANCIENT SYRACUSE.

PERHAPS the most striking proofs of the magnitude of the old city of Syracuse are the enormous quarries from which the stone had been hewn in past ages, to construct the houses and temples, the dwellings and places of amusement, of the million inhabitants whom history tells us resided within the walls. One of these quarries, which is now the garden of the Capuchin convent, we examined minutely. It is a deep, wall-sided, irregular-shaped cut in the rock, said to be one hundred feet deep. At some places this huge excavation is a hundred yards broad, at others it is contracted to a tenth part of that width. The ground at the bottom is not level, but rises and falls, according, I imagine, as the piles of rubbish were moved hither and thither by the workmen. It is every where covered either with vegetables or flower-beds, either under the spade of the gardener, or thickly grown up with orange-trees, olives, limes, and figs, some of them absolutely like forest-trees; besides almonds, vines, pomegranates, and other trees, and flowering-shrubs, all luxuriating in the shelter of this singular excavation. The sides at most places are richly clad with a matting of ivy, it is difficult to tell how thick, which occasionally hangs down like a curtain, in front of enormous caverns, receding far back into the living rock. The principal of the convent, greatly pleased with our raptures, showed us over his garden; and was evidently flattered by our saying we had seen nothing in the world so like what we read of in the Arabian Nights.

In another quarry of still vaster dimensions, we visited the celebrated Ear of Dionysius*; where the echo is certainly very wonderful: a pistol was fired near the mouth while we stood at the inner end of the cave, and I counted the reverberations for twenty seconds. I feel it difficult to describe the solemn effect of this sound, which more nearly resembled a peal of thunder at a short, distance than anything else, but divested of the abrupt, startling, rattling sort of harsh sound which belongs to thunder. On the contrary, though very loud, the report of a pistol fired in Dionysius's Ear was rather of a soft sound, even from the first, becoming more and more mellow at every repercussion of the air.

In most of these quarries the marks of the workmen's tools are very apparent. It is even possible to tell the size and shape of many of the stones which have been cut out, and sometimes to follow the order in which they were removed. These trivial but distinct and indubitable traces of the handiwork of the ancients, carry with them, it strikes me, a peculiar sort of authenticity and unpretending truth, which bring old times more vividly before our minds than the great works of art do. For it may be almost said that the statues and temples belong to a different and higher order of beings, with whom we moderns have little resemblance. When we lose ourselves in admiration of the Venus, or the Apollo, or stand awe-struck before the Temple of Neptune at Pæstum, it is almost as difficult to bring the imagination up to the belief that we are of the same race with the men who executed these works, as it is when looking at the planet Jupiter, or at the ring of Saturn, to conceive that these stupendous bodies form an actual part of the same system to which we pigmies belong. We know by history in the one case, and by scientific demonstrations in the other, that it must be so, but it is difficult to take it all in. But the simple touch of a pickaxe on the face of the rock, in an old quarry like that of Syracuse, tells quite a different story, and one which none can doubt. We almost hear the sound ring in our ears, and half wonder that we do not see the crowds of Greek or Roman workmen labouring round about us.—HALL'S *Patchwork.*

* See *Saturday Magazine*, Vol. XIV. p. 140

ON SPEAKING MACHINES.

II.

THE first attempt made with anything like success, to produce a piece of mechanism capable of imitating vocal sounds, arose out a question proposed by the Imperial Academy of St. Petersburg, in 1779. The question, or rather questions, ran as follow:—"What is the nature and character of the sounds of the vowels A E I O U?" and "Can an instrument be constructed, like the *vox humana* pipes of the organ, which shall accurately express the sounds of the vowels?"

Professor C. G. Kratzenstein gained the prize for the best answer to these two questions. He achieved results not equal to those which have since been obtained, but sufficient to reflect credit on his industry and talent. After examining the positions of the various organs, and measuring the apertures made by the lips, teeth, &c., in the production of the different sounds, he constructed a series of tubes, which, when applied to an organ-bellows, imitated with tolerable accuracy, the five vowel-sounds required. These tubes were of the most grotesque and complicated forms; for which no reason was offered, except that experience had shown these forms to be the best adapted to the production of the sounds in question. Some of the pipes were rendered vocal by the application of vibrating reeds, like those in clarionets; while others were open in the manner of a common organ-pipe.

About the same time that Professor Kratzenstein was engaged in this inquiry, M. de Kempelen, so celebrated for his automaton chess player*, and other clever pieces of mechanism, was occupied in a more extensive investigation of the same subject. He attempted to imitate not only the vowel-sounds, but also the consonants; and his results are well worthy of our notice.

Kempelen at first entertained no hope of obtaining consonants, and if obtained of being able to unite them with vowels in the form of words. In the course of his investigations he tried a large variety of musical instruments, even horns and trumpets, with the view of discovering which of them emitted sounds approaching nearest to the human voice; but although he was aware that the reeds of hautboys, clarionets and bassoons, came nearer to the human voice than most others, and also that a reed-stop, called *vox humana* from its resemblance to the human voice, had been adapted to organs, his researches were ineffectual; for the sound of those reeds was found, on comparison, to be a very imperfect imitation of what they were intended to represent. At length, having accidentally heard the reed of a bagpipe, he conceived that it exceeded all others in this respect, and thence made it the subject of his subsequent experiments.

Having particularly studied the mechanism of the human voice, he formed an opinion that the sound A (in the Continental form, equivalent to *ah* in English, or to the *a* in the word *father*,) was the fundamental part of the voice; such opinion being probably influenced by the circumstance that this sound was one which he could imitate by a pipe with a vibrating reed attached to it. But he found himself unable to imitate any other sound, and was thereupon led to seek for contrivances of other kinds. After long study he contrived a hollow oval box, divided into halves which, by being hinged to the box, more or less resembled jaws. This box was used, not instead of, but in conjunction with, the tube; the cavity of the box being made to receive the sounds as they issued from the tube. He thus found that by varying the degree in which the box was opened or closed, he could produce the sounds A, O, OU, and an imperfect E; but no indications of I, or the German ü.

This success prompted Kempelen to direct his attention to the consonants; and after the labour of two years he obtained from different forms of cavity, the sounds of P, M, and L. With the vowels and consonants thus obtained he could compose syllables, and such short words as *mama, papa, aula, lama, mulo*. Still he had to conquer a great difficulty, which arose from the circumstance that the first letter did not cease when the second commenced; and on attempting to procure the sounds in immediate succession, they were confounded together, the word *papa*, for instance, instead of being one word, evidently consisted of four successive sounds. He also found that the too sudden discharge of air into the tube produced a faint sound of K before every other sound, so that *aula* became *ka-ku-kl-ka;* and that sometimes an aspiration followed a consonant, giving *papa* the sound of *ph-a-ph-a*. With untiring application Kempelen surmounted these several difficulties; until he so far imitated the natural phenomena as to make one glottis and one mouth (or representatives of them) produce various sounds,—sounds, too, not only of letters, syllables, and short words, but of long words, and even sentences, such as "*opera*," "*astronomy*," "*Constantinopolis*," "*vous êtes mon ami*," "*je vous aime de tout mon cœur*," "*Leopoldus Secundus*," and others.

Without entering minutely into a description of Kempelen's apparatus, we may state that it consisted essentially of five parts: 1, a reed, to represent the human glottis; 2, an air-chest, with internal valves; 3, bellows, to represent the lungs; 4, a cavity with much complex mechanism, to represent the mouth; and 5, two apertures, to represent nostrils. The reed was a hollow square box or tube, having a thin vibratory ivory slip resting horizontally on it, and acting as a vibratory tongue. The tube was inserted at one end into the air-chest, in such a manner that a blast from the bellows set the vibratory tongue in motion, and thus produced sound. To soften the vibration, the part against which the tongue vibrated was covered with leather; and the pitch of the pipe was raised or lowered by increasing or diminishing the tension of the spring. One end of the air-chest, which was of an oblong figure, received this voice-pipe, while into the opposite end was inserted the mouth of the bellows; both apertures being guarded by leather, to prevent the unnecessary waste of air. Two smaller air-chests were placed in the larger one, each having a valve closed by the pressure of a spring, and also a round aperture adapted to receive through the side of the large air-chest a tin funnel. This funnel was so contrived as, by modifying the sounds emitted by the reed, to give the sounds of S, Z, S C H, and J. The cavity to represent the mouth was formed of elastic materials, capable of yielding to the impression of air. The two tubes intended to represent the nostrils were so contrived, that when the mouth-piece was closed, and both tubes were open, the sound of M was heard; when one was closed and the other open the sound was that of N.

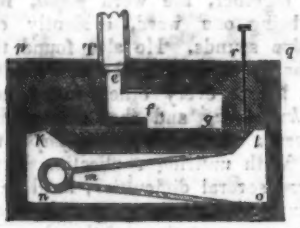
The arrangements whereby M. de Kempelen produced these effects were so complicated that a wood-cut illustration would render the subject less instead of more clear. We shall however, be able to show the principle involved by describing the apparatus employed by Mr. Willis, of Cambridge, in the course of an investigation on this subject, some years ago. His object was, in the first place, to repeat Kempelen's experiments respecting the vowels; and to this we will at present confine our remarks. It will be necessary to understand the construction, 1st, of the *air-chest*, by which a current of air is produced; 2nd, the *vibrating reed*, by which the sound is produced; and 3rd, the *cavity*, whereby the sound is modified so as to resemble vowels.

Fig. 1. represents the mechanism of the air-chest employed by Mr. Willis. A large pair of bellows kept in motion by the foot, and so constructed as to afford a constant pressure of air, is connected with a long horizontal trunk or wind-chest, of which *k l n o* is a cross section, and which is thus kept filled with condensed air. Th

* A series of articles explanatory of the automaton chess player will be found in the *Saturday Magazine*, Vol. XIX.

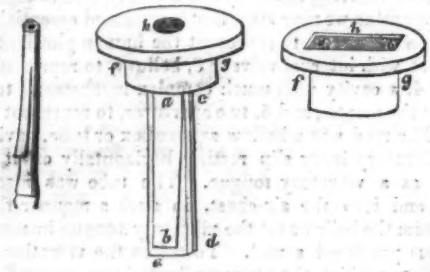
upper side of this trunk consists of a very thick board, *p k q l*, which is pierced with a number of passages similar to *e f g*, every one of which is furnished with a valve, *k l*, moving on a joint at *k*, and kept closed by a spring *m*. A wire terminating in a knob or key, *r*, passes through a hole in the upper board, and rests on

Fig. 1.



the valve, so that on pressing down this knob the valve opens, and a current of condensed air immediately rushes through the corresponding passage *e f g*, and passes into any pipe which may be fixed at the aperture *e*.

Fig. 2. Fig. 3. Fig. 4.



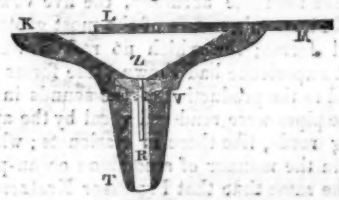
Let us next notice the tongue or vibrating reed, by which the current of air is made sonorous. Organ-builders are accustomed to apply the term *reed* to the hollow tube to which the tongue is fixed; a name originating probably in the mode in which common reeds were formerly cut so as to emit sounds. Many of our younger readers have, doubtless, in their field rambles, produced a rude kind of musical instrument by cutting a reed in the manner of fig. 2. Mr. Willis's reeds are formed similar to figs. 3 and 4. They are attached to blocks, *f g h*, furnished with a circular tenon, *f g*, by which they can be fitted into the different pieces of apparatus employed. In fig. 3, *a b* is a tongue of thin brass, fixed firmly at its upper extremity, *a*, but capable of vibrating freely in and out of a rectangular aperture in the side of the small brass tube or reed, *c e d*, which it very nearly fits. In fig. 4, *a b* is the tongue, attached at *a*, and capable of vibrating through an aperture, which it very nearly fits, in a brass-plate screwed to the upper surface of the block. This is the principle of vibration in some beautiful musical instruments introduced by Mr. Wheatstone.

Lastly we have to speak of the cavity intended to represent the mouth, in Mr. Willis's apparatus. He employs a piece of apparatus represented in fig. 5, con-

Fig 5

sisting of a cavity z, with an opening proceeding from its lower part. Into this opening is fixed one of the reeds seen at fig. 3; so that any air which may enter from the bottom of the opening cannot penetrate into the cavity without passing through the reed, and thus setting the tongue into vibration. It was such a cavity as this that De Kempelen first employed, and Mr. Willis proceeded to use it in the following manner. He fixed the part VT of the mouth-piece into the opening *e* of the air-chest (represented in fig. 1 on a smaller scale), and sent a current of air through it. This current became sonorous by passing through the reed R; and by placing the hand in different positions in the cavity Z, the sound acquired certain vocal qualities, analogous to those which result from varying the form and cavity of the mouth in speaking. Mr. Willis found, however, that by using a shallower cavity, and by placing a sliding board over it, he could produce some of the vowel sounds without inserting his hand in the cavity. Thus, for example, by putting a cover ML on the cavity, he could produce the vowels UO and A, by gradually enlarging the opening KL. His success led him to adopt the use of a shallower cavity, as in fig. 6; three inches

Fig. 6.



in diameter, and half an inch in depth. With this he found that he could produce the whole series of vowel sounds, U O A E I, by varying the aperture KL. It may be necessary to remark that the vowel sounds here alluded to are not such as are heard in England, but the continental vowels, equivalent, respectively, to *oo, o, ah, ay, ee*.

The manner in which Mr. Willis extended and simplified the results obtained by this ingenious apparatus, will be explained in another article.

IDLENESS is that which sets all the capacities of the soul wide open, to let in the evil spirit; and to give both him, and all the villanies he can bring along with him, a free reception and a full possession: whereas, on the contrary, labouriousness shuts the doors and stops all the avenues of the mind, whereby a temptation would enter, and (which is yet more) leaves no void room for it to dwell there, if by any accident it should chance to creep in so that let but the course a man takes be just, and lawful; and then the more active, still the more innocent; for action both perfects nature and ministers to grace; whereas idleness, like the rust of the soul, by its long lying still, first soils the beauty, and then eats out the strength of it.—DEAN SOUTH.

To remember happiness which cannot be restored is pain, but of a softened kind. Our recollections are unfortunately mingled with much that we deplore, and with many actions which we bitterly repent; still in the most chequered life, I firmly think there are so many little rays of sunshine to look back upon, that I do not believe any mortal (unless he had put himself out of the pale of hope) would deliberately drain a goblet of the waters of Lethe, if he had it in his power.—DICKENS.

AN EVENING HYMN.

THOU, O God! this day hast spared us;
Wearied we lie down to rest;
Through the silent watches guard us,
Let no foe our sleep molest.
Lord! do Thou our guardian be,—
Sweet it is to trust in Thee.

Pilgrims here on earth, and strangers,
All we have Thy hand bestows;
Keep us, Lord! this night from dangers,
In Thy love may we repose;
And when life's short day is past,
Rest with Thee in Heaven at last.

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